18. (Amended) A substrate comprising:

a plurality of lands, each land having a substantially circular perimeter and a geometric center, wherein each land has a via therein that is offset with respect to the geometric center of the land; and

a plurality of solder balls, each solder ball adhering to a respective one of the lands, each solder ball adhering to the entire respective land.

19. (Amended) The substrate recited in claim 18, [wherein each land has an edge,] wherein each via has a geometric center, and wherein the geometric center of each via is in a region between the geometric center and the perimeter [edge] of its associated land.

21. (Amended) An electronic assembly comprising:

an integrated circuit package having a plurality of contacts;

a substrate having a plurality of lands, each land having a geometric center and an edge, each land having a via therein extending into the substrate, each via having a geometric center in a region between the geometric center and the edge of its associated land; and

a plurality of solder balls, each coupling one of the plurality of contacts to a respective one of the plurality of lands, each of the solder balls contacting substantially the entire respective land to the edge of such land.

30. (Amended) The electronic system recited in claim 28 [29], wherein the geometric centers of vias of adjacent lands are offset from the geometric centers of such lands in the same direction.

32. (Amended) The substrate recited in claim 18, wherein each land has an edge defining a perimeter, and wherein each solder ball adheres to the entire respective land within [to] the perimeter of such land.

35. (Amended) The substrate recited in claim 34, wherein each land has an edge, wherein each via has a geometric center, and wherein the geometric center of each via is in a region between the geometric center and the edge of its associated land.

37. (Amended) An electronic assembly comprising:

an integrated circuit package having a plurality of contacts and a centerline separating the plurality of contacts into two substantially equal portions; and

a substrate having a plurality of lands respectively aligned with the plurality of contacts, wherein at least the contacts or the lands are coated with solder, each land having a substantially circular perimeter and a geometric center [and an edge], each land having a via offset therein extending into the substrate, each via having a geometric center located in a region between the geometric center and the perimeter [edge] of its associated land, wherein the lands comprise a first group having vias offset in a first direction and a second group having vias offset in a second direction, [wherein the geometric centers of vias of the first group of lands are offset in a first direction and the geometric centers of vias of the second group of lands are offset in a second direction,] and wherein the first and second groups are on opposite sides of the centerline.

38. (Amended) The electronic assembly recited in claim 37, [wherein the contacts and the lands comprise a coating of solder and] wherein, during a solder reflow operation, surface tension forces in molten solder residing between the respectively aligned contacts and lands are substantially equalized between the first and second groups of lands.

43. (Amended) A substrate comprising a plurality of lands and a centerline separating the plurality of lands into two substantially equal portions, each land having a substantially circular perimeter and a geometric center [and an edge], wherein each land has a via offset therein extending into the substrate, wherein each via has a geometric center located in a region between the geometric center and the perimeter [edge] of its associated land, wherein the lands comprise a first group having vias offset in a first direction and a second group having vias offset in a second direction, [wherein the geometric centers of vias of the first group of lands are offset in a

first direction and the geometric centers of vias of the second group of lands are offset in a second direction,] and wherein the first and second groups are on opposite sides of the centerline.

Please add new claims 46-47 as follows:

46. The electronic assembly recited in claim 37, wherein the geometric centers of vias of the first group of lands are offset in the first direction and the geometric centers of vias of the second group of lands are offset in the second direction.

47. The substrate recited in claim 43, wherein the geometric centers of vias of the first group of lands are offset in the first direction and the geometric centers of vias of the second group of lands are offset in the second direction.

REMARKS

Applicants have carefully reviewed and considered the Office Action mailed on December 4, 2002, and the references cited therewith.

Claims 29 and 44 are canceled. Claims 18-19, 21, 30, 32, 35, 37-38, and 43 are amended. New claims 46-47 are added.

As a result, claims 18-25, 27-28, 30-43, and 45-47 are now pending in this application.

For the convenience of the Examiner, Applicants' remarks concerning the claims will be presented in the same order in which the Examiner presented them in the Office Action.

Information Disclosure Statement

Applicants respectfully repeat the request (previously made in the Amendment and Response mailed on May 13, 2002) that a copy of the 1449 Form, listing all references that were submitted with the Information Disclosure Statement filed on February 21, 2001, marked as being considered and initialed by the Examiner, be returned with the next official communication.